REMARKS/ARGUMENTS

Claims 1-36 are pending in the application. Claim 1, 13, and 25 have been amended to clarify certain terms. Reconsideration is respectfully requested. Applicant submits that the pending claims 1-36 are patentable over the art of record and allowance is respectfully requested of claims 1-36.

Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. "Dynamic Maintenance of Web Indexes Using Landmarks" in view of Jim McKeeth (U.S. Patent No. 6,763,362). Applicants respectfully traverse.

The Lim reference is directed to studying the problem of keeping inverted indexes up-to-date (Introduction). On the other hand, claims 1, 13, and 25 are directed to handling redirects in documents. For example, paragraph 5 on page 1 of the Specification describes:

> Some Web pages do not contain content, but, instead, contain a "redirect" to another Web page. For example, if a given Web page A (i.e., a source) redirects to another Web page B (i.e., a target), the Web browser shows Web page B whenever a request for Web page A is received.

Claims 1, 13, and 25 describe "while generating an index" (e.g., Specification, pages 4–9, paragraphs 15-32; FIGs. 2A and 2B), while the Lim reference is directed to studying updates to an index that has already been created. Therefore, Applicants respectfully submit that the Lim reference teaches away from claims 1, 13, and 25.

Additionally, claims 1, 13, and 25 describe forming at least one equivalence class that includes documents that are connected through a redirect, wherein each equivalence class describes a redirect chain. For example, paragraph 21 on page 6 of the Specification describes:

> Initially, each document is in its own equivalence class. Then, for each entry in the redirect file, if a first document redirects to a second document, the equivalence classes of the first and second documents are unified. Continuing with this processing, if the second document redirects to a third document, then the third document is in the same

equivalence class as the first and second documents. The redirect component 136, thus, processes the entries in the redirect file to identify redirect chains in the form of equivalence classes.

The Examiner cites the Lim reference, section 2.1, "Forward Index Update", as teaching this element. Applicants respectfully traverse. The Lim reference describes that for each document, a forward index stores words that occur in that document and the positions of each occurrence. Storing words that occur in a document does not teach or suggest forming at least one equivalence class that includes documents that are connected through a redirect, wherein each equivalence class describes a redirect chain.

Moreover, claims 1, 13, and 25 also describe detecting cycles for each equivalence class, wherein documents in a cycle are marked so that they are not indexed, and, wherein, for each equivalence class, the cycle is formed when a last document in the redirect chain redirects to a first document in the redirect chain. For example, paragraph 22 on page 6 of the Specification describes:

> For example, a cycle occurs when a first document redirects to a second document, which redirects to a third document, which redirects back to the first document. Once the redirect chains are identified, the redirect component 136 performs cycle detection. In particular, cycle detection analyzes each redirect chain, looking for cycles. If a cycle is detected in a redirect chain, the redirect component 136 marks the documents involved in that redirect chain with a "do not index" indicator (e.g., flag), which indicates to the indexing component 142 that these documents are invalid documents that should not be indexed.

The Examiner cites the Lim reference, Section 2.4, Approximate nearness queries, as teaching this. Applicants respectfully traverse. Section 2.4 describes that, if fine grain positional information is not needed, the inverted index can just store the landmark IDs without the offsets. There is no description of detecting cycles for each equivalence class, wherein documents in a cycle are marked so that they are not indexed, and, wherein, for each equivalence class, the cycle

is formed when a last document in the redirect chain redirects to a first document in the redirect chain.

Also, claims 1, 13, and 26 describe detecting incomplete chains for each equivalence class, wherein documents in an incomplete chain are marked so that they are not indexed, and, wherein, for each equivalence class, the indirect chain is formed when a last document in the redirect chain redirects to a document that has not been crawled. For example, paragraph 23 on pages 6-7 of the Specification describes:

> An example of an incomplete chain occurs when the documents in a single redirect chain are redirects, R1->R2->...->Rn, where Rn is a redirect to a document that was not discovered, fetched, and stored by the crawler component 132 (i.e., "crawled"). This redirect chain is considered incomplete because there is no content associated with Rn (because it was not "crawled"). The redirect component 136 marks documents in the incomplete redirect chain with a "do not index" indicator.

The Lim reference in section 4, Experimental Evaluation, describes measuring the number of inverted index update operations generated by the landmark-diff method and compare it with that of the forward index method. There is no description of detecting incomplete chains for each equivalence class, wherein documents in an incomplete chain are marked so that they are not indexed, and, wherein, for each equivalence class, the indirect chain is formed when a last document in the redirect chain redirects to a document that has not been crawled.

Furthermore, claims 1, 13, and 26 describe selecting a representative for each equivalence class whose documents are to be indexed, wherein the representative is associated with a path that indicates a location of a document in a data store. For example, paragraph 25 on page 7 of the Specification describes:

> In certain implementations, the redirect component 136 selects a representative for each redirect chain (e.g., equivalence class) whose documents have not been marked with a "do not index" indicator. In certain implementations, the representative is a path (e.g., a URL) with which the content of the final target document in the chain is indexed.

The Examiner cites the Lim reference, section 4, Landmark Policy and Block Size, as teaching "selecting a representative for each equivalence class" Applicants respectfully traverse. The Lim reference in the cited section 4 describes fixed size partitioning. There is no description of selecting a representative for each equivalence class whose documents are to be indexed.

The Examiner also notes that Lim does not explicitly indicate claimed documents are to be indexed wherein the representative is associated with a path that indicates a location of a document in a data store, but cites the McKeeth patent as teaching this. Applicants respectfully traverse. The McKeeth patent describes that a popularity parameter is defined, and a popularity value is assigned to each link, and the most popular links are selected for updating the contents stored, or associated with, the site to which the links refer (Abstract). Applicants respectfully submit that the McKeeth patent does not teach or suggest that the representative for each equivalence class (wherein each equivalence class describes a redirect chain, as described in an earlier element of claims 1, 13, and 25) is associated with a path that indicates a location of a document in a data store.

Thus, claims 1, 13, and 25 are not taught or suggested by the Lim reference or the McKeeth patent, either alone or in combination.

Dependent claims 2-12, 14-24, and 26-36 incorporate the language of independent claims 1, 13, and 25 and add additional novel elements. Therefore, dependent claims 2-12, 14-24, and 26-36 are not are not taught or suggested by the Lim reference or the McKeeth patent, either alone or in combination, for at least the same reasons as were discussed with respect to claims 1, 13, and 25.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-36 are patentable over the art of record. Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0460.

The attorney of record invites the Examiner to contact her at (310) 553-7973 if the Examiner believes such contact would advance the prosecution of the case.

Dated: February 13, 2007   By:___/Janaki K. Davda/____

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